

# The Flagstaff Sun-Democrat.

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## SECRET SOCIETIES.

**A. O. U. W.—FLAGSTAFF LODGE, No. 12.** Meets every Thursday night, in G. A. R. hall. Visiting Workmen are cordially invited. **DR. D. J. BRANNEN, M. W. LOUIS SPIER, Recorder.**

**COURT COCONINO, I. O. F., NO. 886.** Meets every Tuesday evening in G. A. R. hall. Visiting brethren cordially invited to attend. **DR. D. J. BRANNEN, C. R. LOUIS SPIER, R. S.**

**FLAGSTAFF LODGE, NO. 7, F. & A. M.** Regular meetings on the first Saturday night of each calendar month in Masonic Hall, Kilpatrick building. Sojourning brethren cordially invited. **J. GUTHRIE SAVAGE, Secretary.**

**FOREST CAMP, NO. 1, WOODMEN of the World.** Meets the first and third Mondays in each month, in the G. A. R. Hall. Visiting Sovereigns cordially welcome. **T. E. PULLMAN, Clerk.**

**G. A. R.—REGULAR MEETINGS OF** Hanson Post, G. A. R., No. 4, Department of Arizona, will be held in G. A. R. hall on second and last Saturday in each month. **T. E. HUNTER, Commander.**

**I. O. O. F.—FLAGSTAFF LODGE, NO. 11.** Meets every Friday evening in Masonic hall. Visiting brethren cordially invited. **J. E. JONES, N. O. J. L. DOUGHERTY, Secretary.**

**MOUNTAIN LODGE, NO. 10, K. O. P.** Meets every Wednesday night in their castle hall in G. A. R. hall. All visiting brothers invited to attend. **W. A. MAYFLOWER, C. C. C. B. COLE, K. of K.**

## CHURCH DIRECTORY.

**CATHOLIC CHURCH, REV. P. DILLY, Pastor.** On Sundays: Low Mass at 7:30 a. m.; High Mass at 9 a. m.; Sunday School at 11 a. m. Evening services at 7:30 p. m. On week days: Mass at 7 a. m. On the second Sunday of each month, prayer meeting at 10 a. m.; Sunday School at 11 a. m. All cordially invited.

**FIRST M. E. CHURCH, CORNER OF** Church and Laroux Streets, C. F. Wilson, Pastor. Preaching at 11 a. m. and 7 p. m. Sundays: Sunday school at 10 a. m. Oscar Gibson, Superintendent. Class meetings at 12:15 p. m. Epworth League 6:30 p. m. Prayer meeting Wednesday evening at 7:30. Everybody welcome.

**FIRST PRESBYTERIAN CHURCH,** North San Francisco street, H. P. Corser, pastor. Sabbath services: Preaching 11 a. m. and 8 p. m.; Sunday school, 10 a. m.; Y. P. S. C. R. prayer meeting, 7:15 p. m. Mid-week conference and prayer, Wednesday evening at 8 p. m. A cordial invitation is extended to all.

## ARIZONA CENTRAL BANK.

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## MINES OF THE GRAND CANYON.

### A New Copper District Richer Than the Lake Superior Region.

**J. H. McClintock Visits the Field and Describes it in Detail—"Among the Richest and Most Remarkable of Arizona."**

James H. McClintock, the well-known newspaper man of Phoenix, visited the Grand Canyon copper district last month and gives the following as his impressions of this new mining region:

Crossing the northern portion of Arizona lies the far-famed Canyon of the Colorado river—the Grand Canyon—pre-eminent, incomparable, the grandest gash known on the face of nature, where rocks are risen to the depth of 7,000 feet from the surface and where for hundreds of miles the strata are exposed far deeper than in any mine on earth. It is the ideal region for the prospector, for Nature has already done the "development work" on the claims that he may discover and locate. Arizona throughout is "mineralized" to an extent unknown probably to any other country. It is therefore logical that the erosion of the river's channel has exposed many rich ledges of the precious ores, for many years successfully mined in other parts of the Southwest.

I spent four weeks of May and June of the current year among the mines of the Grand Canyon district. The copper mines I believe are among the richest and most remarkable of Arizona and I speak from an experience that embraces investigation of all the other copper camps of the Territory.

Most notable of the Canyon district mines are those which lie on or near to the Canyon's southern rim. For a distance of about fifteen miles south and for forty miles along the line of the Canyon the country limestone, carboniferous in character, bears copper and iron in appreciable quantities. From the evidence of the prospectors and my own observations I would say that the really valuable portion of this immense deposit is about three miles in width and at least fifteen miles in length, the length being from north to south.

This copper district on the southern rim is modern indeed. The first localities of any importance were made last October. There was even more than the usual excitement over new finds when the specimens found were exhibited and the cold and snow of the succeeding winter months did not prevent the staking of more than 200 claims. Little more than the statutory assessment work has been done on any of them and the deepest workings at the time of my departure were down only thirty-five feet. That far down the ore preserved uniformity of character and richness.

In character the ores are carbonates, black and red oxides, handsome ores, mainly of the azurite and malachite varieties. They are found only where the limestone has been disturbed through seismic action, and never where the regular stratification of the region remains undisturbed. They are invariably closely associated with the limestone and run high in iron, forming an ore that carries to the smelter its own flux. The percentages of copper run high. I have seen many large specimens that exceeded 50 per cent. Good authorities state that the average of the ores piled up on the dumps of the district will exceed 20 per cent. This is 400 pounds of metal to the ton. The ores of the Lake Superior region are worked with profit when they run down to sixteen pounds to the ton of ore.

As to quantity: The ore lies horizontally, or nearly so, and no man of course can tell whether the strata so

far exposed are underlain with others. But to-day, on the dumps of one company alone (the Tusayan Development company of which Lombard, Goode & Co., of Chicago, New York and London are the Eastern representatives and financial agents) are several thousand tons of ore taken out in simple assessment and surface development work and tens of thousands more tons are exposed in the cuts and tunnels and drifts. It would be a rich district worthy of capital and of reduction works, if the ore bodies were no deeper than they have already been developed.

But there is no doubt that the greatest riches of the district are at even greater depths. I believe that in the district will yet be the deepest workings known to miners anywhere on the face of the globe. The copper is without doubt eruptive in its deposition. It has been vomited from the depths of the earth, and found lodgment in the riven lime and sandstone rocks, spreading out, branch-like, from the cleft of the principal eruptions, where now of course are to be found the mother lodes. Then Nature, with her iron, lime and oxygen, leached off the sulphur. Perhaps this will account for the presence in the near vicinity of immense beds of sulphate of lime, gypsum.

This eruptive theory is carried out on inspection of the mines of the Canyon's depths. I found three "mother lodes" of copper at depths that are almost startling. The highest in altitude is the Hogan claim of the Tusayan company, considered by the company's manager, Gen. W. O. O'Neill, to be the veritable mineral spout that overflows with copper the region above. It is of the basest black sulphide, assaying over 10 per cent in copper. It is a monster in size, exposed along a limestone and finest ore cut for 400 feet width of ore body. Its base is hidden in the debris of the Canyon's side; its top is fully 800 feet below the Canyon's rim.

The Cameron mine, twenty miles up the river, is one of the first discovered and has been worked for years. It has a depth of 2,200 feet from the rim. The ores vary, though mainly chaly-pyrite. They assay up to 72 per cent of metal and average throughout very high.

The third ledge of copper ore was at the very bottom of the Canyon, in the primeval granite, 6,000 feet from the surface and dipping below the bed of the stream. This ledge has never been worked and has but lately been discovered. It has a width of about sixty feet and its ore face is exposed for fully 1,200 feet of depth. The location is not far from the bottom of the Bass trail, fifteen miles below the Hogan lead.

The question of reduction is generally one of the weightiest in copper mining. Some of the ores of the district have been valuable enough to ship to Pueblo, Colo., and Agua Calientes, Mexico, for smelting. The waters of the Indian garden creek can be readily piped with a fall of at least 3,000 feet to the Colorado's level, the power to be returned by electric wire to the summit. The creek has an average flow of 100 miner's inches, or nearly 1,000 gallons a minute. Several other such water powers can be developed at other points along the Canyon's side. Something that would approximate Niagara would be the power to be secured from Cataract creek. I should judge the minimum flow of this stream to be about 50,000 miner's inches. The drop to the Colorado river within ten miles is fully 3,000 feet.

Timber there is in plenty on the rim. Coal could be secured from Gallup, on the Atlantic & Pacific, just across the Arizona line, or from the Little Colorado mines, if it were made possible to use the river for its carriage. Coke could be obtained from Trinidad, Colo., at low cost.

Though copper is the main metal of the Grand Canyon region it is by no means the only one. Gold is found in

quartz at the surface and further down in pyrites. One ledge of the pyrites is 200 feet in width. It assays little in gold but would be of immense value for the production of sulphuric acid, for the reduction of sulphuretic copper ores by the Swedish process. Lead carbonates carrying silver are found on Cataract creek. The unusual products include long staple asbestos, salt and several kinds of precious stones.

Of course a volume could be written on the possibilities of mineral development in such a region. I have done little more than indicate the possibilities. I believe the district will soon be known as one of the greatest mineral producers of the world.

### J. CURTIS WASSON.

**Writes a Letter to "The Sun-Democrat" While in Mid Ocean.**

**S. S. AUSTRALIA, MID-OCEAN, lat. 26 deg. 10 min., long. 149 deg. 2 min., June 21, 1897.—EDITORS SUN-DEMOCRAT:** Thinking, perhaps, a letter from mid-ocean might be of interest, I write concerning our trip.

We weighed anchor at the San Francisco harbor at 2 p. m. June 15. The wharf was crowded with passengers, friends, visitors, spectators and seamen. The day was quite clear and all were eager for the voyage. On the wharf were representatives of all nationalities, but preeminent in appearance on the dock were some half blood Kanakas. They were a bright-eyed, dark complexioned, kindly looking, free, happy careless set of people. They were down to bid adieu to some of their tribe enroute for their loved Honolulu.

As the vessel (the Australia, one of their finest ships) sailed out of the harbor, I, profiting by past experience, took precautionary measures by going to my stateroom and lying down. In a short time I returned to the main deck to watch the last vestige of land slowly recede from sight. There is an awful feeling, a weird foreboding, connected with the slowly dropping from the vision of all the traces of the land which we have been pleased to call "our own, our native land."

Perhaps a short description of our vessel would be of interest. Name, Australia; built, 1877; cost, \$250,000; tonnage, 3000 tons; length, 398 feet; width, 34 feet; men in crew, including cooks, stewards, mechanics, sailors, officers, etc., 98; first-class cabin passengers, 49; steerage passengers, 75; total number on board, 222; velocity, about 13 knots per hour, or 305 miles per day. The menu and accommodations are in every way first-class.

The gannets (a kind of seagull) are constantly following us, like death or fate. They are crossing hither and thither, sailing around and around, now rising to extreme heights, now dipping their wings into the waves beneath. The water reflects a deep indigo blue; and to watch the flying fish skipping over the crested waves, then dart and dive into the briny blue beneath is really a lovely sight, while occasionally in the merge of the horizon may be seen the spouting of some lonely whale as he comes to the surface to breathe.

Last night I witnessed one of the most picturesque scenes of my life. The sea was clear, the wind was quiet and gently flapped the sails on the main mast; the stars shown as I have never seen them in the northern latitudes, they came down and almost seemed to meet their dual reflection in the watery waves; the blue above seemed to complement the blue beneath; the sound of one bell told that the hour was half past eight. The deck was covered with groups of merry makers singing in the Kanaka tongue some of the most pensive and plaintive melodies so characteristic of Hawaiian music; on a deck chair sat a Kanaka maiden accompanying the airs by the weird, but persuasive tingle of the taro-patchi, while her sister sitting by her side performs on the ukulili. Both the taro-patchi and ukulili are



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very sweet instruments and well adapted to pieces in waltz time. Whenever a song in waltz time was sung, a dozen couples would dance about in rhythmic time as the melody mingled with the air of heaven. The while the boat kept stately time to the rhythmic flow of voices on her deck. The sailors, jolly old tars who have entered all the ports of the world, seem quite indifferent as to whether or not they enter any in the next, as they sit in groups fore and aft smoking their "pipes of peace and spinning their yarns of nautical lore." The officers, from captain down, pacing the decks to and fro, the merry chatter of children, the friendly conversations of people from all nooks of mother earth, from Gibraltar to Samon, the genial sociability, all these tend to make the evening one not soon to be forgotten.

There has nothing occurred on board ship especially exciting, save the fire alarm drill this morning at 10 o'clock. I had received a quiet tip on the side by one of the sailors, and when the alarm was given the bells rang, the whistle blew, the passengers from their staterooms, the cooks from the kitchen, all rushed pell mell upon upper deck. They asked where the fire was and grasping their children ran back and forth upon the gangways. The hose men unwound the hose, the sailors turned on the water and imagine the chaos felt by the passengers when they realized that 'twas only a fire drill. It was interesting to see how each one would talk; they all said they were not frightened, but simply wanted to know what was the matter.

To-morrow we anchor in Honolulu at 9 o'clock, when I hope to enter my field of labor as per contract with the Oceanic Steamship Company.

J. C. Wasson.

### Filibusters Land Safely.

**NEW YORK, July 12.—A special to the Journal and Advertiser from Havana says that an expedition of Cuban filibusters from Florida is reported to have landed on Sunday in Havana province, in the mouth of Jaruco Bay. The Spanish gunboat Reina Maria Christina, which was cruising about the coast, endeavored to intercept the expedition, but without success.**

When the cruiser arrived at the spot and disembarked her marines, they were fired upon and driven to their boats by a strong rebel force in ambush. After a brief bombardment of the insurgent's position, the warship, hurried to Havana for reinforcements, buried to Havana for reinforcements. When she returned with them the filibusters had already left with their munitions and supplies for Castillo's headquarters in the Tapaste Hills, closely pursued by Fondevilla's Spanish column, which had marched overland from Minas to intercept their movements.

### Grocer Schloegel's Revenge.

**KANSAS CITY, Mo., July 11.—Dr. A. L. Berger, one of the best-known physicians of Kansas City, was shot and killed this afternoon by John Schloegel, a grocer. Schloegel, when taken to the station, alleged that Berger had raped his wife a few days ago when she was in his (Berger's) office being treated as a patient.**